



The 1,000-Mile Microphone Cable

The Web has resulted in an unprecedented explosion of human expression. The world of the Web includes expression in the form of text (blogs), audio (podcasts), images (Flickr), and video (YouTube). The centrality of text is one way in which school differs from society at large. This is in part a technological artifact. Until recently text has been more easily reproduced and disseminated than audio or visual media. Previously, I've focused on digital video in the age of participation. Audio is an even more accessible medium, and several advances are making it more so.

Connecting Classrooms

Any laptop with a microphone can be a digital recording studio. Many laptops include a built-in microphone, but a USB microphone can be acquired for \$20. Internet phone services such as Skype can connect the classroom to any other location in the world with a phone. Consequently acquisition of audio is not just limited to individuals in immediate physical proximity to the interviewer.

The SkypeOut service makes it possible to call an ordinary phone through Skype for an affordable \$30 for a year of unlimited calls within the United States and Canada. (International calls are about two cents per minute.) Skype allows the caller to connect up to 10 phones in a conference call at no additional charge.

This is a key advance. In effect, the classroom has a 1,000-mile microphone cable connecting it to the world. Many individuals find the presence of a microphone intimidating, but everyone is accustomed to talking on the phone.

There are many ways in which guests can be brought into the classroom. Curriculum-based electronic exchanges among teachers, students, and expert consultants began as soon as schools gained access to the Internet. These interactions have typically been text-based until now, but voice over the Internet protocols (VoIP) now make audio interactions feasible as well.

Whether or not the classroom has a conventional phone, a class can interview a guest speaker over Skype and even establish a conference call to share the experience with others. Skype enhancements allow calls to be digitally recorded (with participant permission, of course), edited, and posted as a podcast for a broader audience. MX Skype Recorder is one of several Windows programs designed for this purpose. Call Recorder is a similar tool for the Macintosh (See Resources for these and other URLs).

StoryCorps

The StoryCorps initiative is a national project designed "to instruct and inspire Americans to record one another's stories in sound." It provides suggestions for effective interviewing methods and examples of interviews. These methods can capture insights on any area of expertise.

For example, we are collaborating with the Smithsonian American Art Museum on a project focusing on the 1920s and 1930s. The goal is to add depth and richness to history classes by providing connections to artifacts from that time period. Because individuals are still living from that era, the auditory medium can provide additional meaning and context. We recently spoke

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Bill Duren, at 101 years, is well positioned to reflect on a career as a math educator in the 1930s.

with William Duren, born in 1905, who reflected on the effect of technological innovations at the dawn of the 20th century. Bill discussed ways in which electricity and the automobile transformed life and talked about his work in the Model T assembly plant.

His memories provide a window on life at the beginning of the 20th century:

We did not have television, radio, or even movies. Folks visited friends back and forth across the street and talked. ... I got my first job making Model T cars in a Ford assembly plant. The cars had wooden frames, and my job was to nail on a metal panel that covered the right side. I nailed the panels on each frame as the car rode down the assembly line.

Extension of free public school to high school at the end of World War I allowed him to continue his education, launching a career as a mathematics educator in which he eventually served as president of the Mathematical Association of America. Any individual with expertise in an area being studied can be interviewed, offering students a way to connect more directly with a topic.

Creating and Communicating

The process of analysis provides an opportunity to think about the structure of a conversation and the language that accompanies it. Identifying main ideas and themes is a recurring activity that is one of the most fundamental skills in school. This process provides an opportunity to practice this skill in another context. Once the main topics are identified, the next step is to place these segments in the desired order.

A number of innovative Web-based audio applications are now appearing that allow students to upload, mix, edit, and store audio files. These sites focus on mixing lyrics and music to create songs, but the same audio-editing capabilities can be used to edit the spoken word. SpliceMusic and JamGlue are two of these emerging sites. Students can work on a project from any location with an Internet connection, without the need to download or install software.

Recently I spoke with Anita McAnear over Skype as she reminisced about the early days of ISTE and its evolution. I uploaded an excerpt to JamGlue to make it available. The conversation can be downloaded as an MP3 file or played from the Web site.



Posting audio on a site such as JamGlue enables others not only to listen to the selection but also to add, edit, and collaborate.

Use of sites such as JamGlue leverages a widespread interest that many students have outside school and connects it to language and learning within school. JamGlue provides a player that can be embedded in a Web page along with the audio interview.

You can embed the conversations with Anita and with William Duren in your own Web page, or even remix them (with attribution) for a project of your own. Search for “Bill Duren” or “Anita McAnear” to access these audio tracks on the JamGlue site.

Auditory Extensions

Combining text and audio adds depth, and allows students to develop fluency in a medium that is becoming ubiquitous outside school. Development of fluency with audio and the spoken word is a useful skill that can serve as a stepping stone to creation of digital stories that combine images with an audio track.

The NPR Web site features selected StoryCorps stories with both a printed transcript and the original audio in the speaker’s own words. Comparison of the printed text with words in the narrator’s voice illustrates differences in the experience.

Auditory extensions to school activities offer a number of potential benefits. Students have always participated in traditional school assignments that make use of community expertise, but in the past these activities have often been text-based. Emerging Web 2.0 technologies and applications make it easier than ever to include other

media. Advances in technology and Web-based tools make it increasingly feasible to explore language in both written and auditory forms.

Resources

- Call Recorder: <http://www.ecamm.com>
- JamGlue: <http://www.jamglue.com>
- MX Skype Recorder: <http://www.skyperec.com>
- NPR: <http://www.npr.org>
- Splice Music: <http://www.splicemusic.com>
- StoryCorps: <http://www.storycorps.net> ■